AMENDMENTS TO THE SPECIFICATION

Please replace paragraph 4 at page 8 with the following amended paragraph:

Fig. 6H is a bar chart showing the reduction in the total infarct volume of the cortex and ~~stratium~~ striatum of AAVNMDAR1-vaccinated animals (n=10) (widely spaced downward sloping lines) compared to AAVlac-treated animals (n=8) (narrowly spaced upward sloping lines) or control naïve rats (n=10) (solid white). *P<0.01. Each bar represents the mean+SEM;

Please replace paragraph 5 at page 8 with the following amended paragraph:

Fig. 7A is a graph showing the effect of vaccination of the behavior of rats in a line crossing test. Data represents the number of line crossings in 5 min intervals over 5 successive days in AAVlac-treated animals (squares-solid line) or AAVNMDAR1-vaccinated animals ~~(diamond-dashed line)~~ (triangle-solid line);

Please replace paragraphs 1-4 at page 10 with the following amended paragraphs:

Fig. 12A demonstrates errors and latencies recorded on the Barnes Circular Maze test. Data represents the number of line crossings in 5 min intervals over 5 successive days in AAVlac (triangle-solid line) or AAVNMDAR1 rats (squares-solid line);

Fig. 12B demonstrates the line crossing and circular track mobility test in AAVlac (squares -solid line) or AAVNMDAR1 rats (triangle -solid line);

Fig. 12C demonstrates the data from the contextual fear conditioning test for AAVlac-treated (narrowly spaced upward sloping lines) and AAVNMDAR1-vaccinated animals (widely spaced downward sloping lines) (*p=0.025);

Fig. 12D demonstrates the data from the Spontaneous Object Recognition test in control (solid white) and AAVNMDAR1-vaccinated animals (narrowly spaced upward sloping lines);

Please replace the first paragraph at page 47 with the following amended paragraph:

~~Neurobasal™~~ NEUROBASAL™ basal medium containing B27 supplement and 0.5 mM L-glutamine (all from Gibco BRL). Medium was replenished every 48 h, with the addition of a mitotic inhibitor (0.5 μM cytosine arabinoside) after 4 days. Cultures were grown for at least 9 days prior to calcium imaging.

Please replace paragraph 2 at page 49 with the following amended paragraph:

For ß-galactosidase antibody screening, 1 μg purified ß-galactosidase protein (Sigma) was separated on a 10% acrylamide gel under reducing conditions and transferred to a nitrocellulose membrane. Serum samples from AAVNMDAR1, naïve and AAVlac animals (1:200), or monoclonal ß-galactosidase (1:5000, Gibco BRL) were applied for 1 h at room temperature (RT) or overnight at 4°C following a 90 min incubation in Tris-buffered saline containing 0.1% Tween 20 (TBST) containing 5% fetal calf serum (FCS) to block non-specific binding. Bound antibodies were detected using a peroxidase-labeled anti-rat or mouse antibody (1:12,000, Sigma) for 1 h at RT, and visualized using the ECL detection system (Amersham). Hippocampal and cortical extracts were prepared from naïve rat brain. Two preparations were used: (i) a crude hippocampal or cortex extract was prepared by homogenizing the tissue in ice cold 320 mM sucrose in 10 mM Tris-HCl, pH 7.4; (ii) a non-denatured membrane extract was prepared by homogenizing tissue as described above, in the presence of protease inhibitors ~~(Mini Complete™,~~ (MINI COMPLETE™, protease inhibitor Boehringer Mannheim). Following centrifugation at 7000g, 10 min, 4°C, the resulting supernatant was centrifuged at 37,000 g, 40 min, 4°C and the pellet resuspended in 10 mM Tris-HCl, pH 7.4 containing protease inhibitors. For NMDAR1 antibody screening, 20 μg total hippocampal extract was separated on a 12% reducing gel or 20 μg non-denatured hippocampal membrane protein on a 10%

Please replace paragraph 2 at page 66 with the following amended paragraph:

For the circular track mobility test, the track used was a modified version of one used to test mobility in mice (Carlsson *et al.* (1990) *Life Sci.* 47: 1729). Each rat was placed inside the track at the start position, facing clockwise, and the number of circuits completed in 5 minutes was recorded. This procedure was conducted for 5 days. Fig. 7A depicts the results from the line crossing test and Fig. 7B depicts the results from the circular track mobility test. Data represents the number of line crossings in 5 min intervals over 5 successive days in AAVlac (squares-solid line) or AAVNMDAR1 rats ~~(diamond-dashed line)~~ (triangle-solid line). In the circular track test, the number of completed circuits in successive days for AAVlac (n=6) and AAVNMDAR1 (n=6) animals are represented.